



# Performance Task Plan

<b>Title</b>	Design a Restaurant
<b>Grade</b>	3 <sup>rd</sup>
<b>Time Line</b>	1 month
<b>Designer(s)</b>	Claire Elliott

## Project Sketch

(a short summary of the unit including expected/possible products)

Students will design a restaurant in teams of two. They will create a digital portfolio that includes a restaurant layout, menu, cooking guide, and written review. This is a cross-curricular unit that incorporates math, science, health, language arts, and technology standards. The unit will conclude with an “Opening Day” simulation of their restaurants where they may showcase their work to parents, students, and visitors.

## Instructional Focus

**Compelling Question:** How do 3<sup>rd</sup> grade standards relate to real-life situations, such as designing a restaurant?

	<b>Focus</b>	<b>Complementary</b>	<b>NETS-s</b>
<b>Standards</b>	<p><b>ELACC3W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons.</p> <p><b>S3P1</b> investigate how heat is produced and the effects of heating and cooling, and will understand a change in temperature indicates a change in heat.</p> <p><b>MCC3.MD.3</b> Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step, “how many more”, and “how many less” problems using information presented in scaled bar graphs.</p> <p><b>HE3.3a</b> Describe characteristics of valid health information, products, and services.</p>	<p><b>HE3.2c</b> Identify consumer influences.</p> <p><b>ELACC3RI6</b> Distinguish their own point of view from that of the author of a text.</p> <p><b>ELACC3W4</b> Produce writing in which the development and organization are appropriate to task and purpose.</p> <p><b>ELACC3W5</b> Develop and strengthen writing as needed by planning, revising, and editing.</p> <p><b>ELACC3SL1a-d</b> Engage effectively in a range of collaborative discussions with diverse partners on <i>grade 3 topics and texts</i>, building on others’ ideas and expressing their own clearly.</p> <p><b>MCC3.OA.1</b> Interpret products of whole numbers.</p> <p><b>MCC3.NBT.3</b> Multiply one-digit whole numbers by multiples of 10 in the range 10–90</p> <p><b>ELACC3RI3</b> Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.</p>	<ol style="list-style-type: none"> <li>1. Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.</li> <li>2. Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.</li> <li>3. Students apply digital tools to gather, evaluate, and use information.</li> <li>4. Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.</li> <li>5. Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.</li> <li>6. Students demonstrate a sound understanding of technology concepts, systems, and operations.</li> </ol>

## Assessment (Milestones)



## Performance Task Plan

Teach the following mini-lessons:

Heat and Energy

- What is heat? Heat production methods
- How to use thermometers
- What is a molecule?
- How does heat move? convection/conduction/radiation; Lava Lamp demonstration
- Conductors vs. Insulators
- Organize Field Trip to Cafeteria – convection oven, using thermometers to make sure food is kept at the right temperature

Math

- What is multiplication? Equal groups, repeated addition
- What is an array? What are rows/columns
- Multiples of 10 – a special number

Health

- How to read a nutrition label: calories, cholesterol, sodium, vitamins, milligrams and grams vs. %DV

Language Arts

- Contrast opinion piece vs. narrative: purpose and structure (opinion on devices)
- Opinion piece: referring to article for supporting details, but writing in your own words (opinion on healthiness of eggs)
- Restaurant Reviews – what kinds of jobs require writing opinions?
- Conference with students to give feedback on their opinion pieces
- Sequencing – following/creating a recipe, sequencing words (first, then, finally, etc.)

Technology

- How to edit a Wiki
- Tech Tools – apps that take notes, take pictures, write captions, draw, sequence, word process
- What is a digital portfolio?

- Take notes during mini-lessons
- Ice Cube Experiment
- Light Bulb Experiment
- 3 Spoons Experiment
- Food Coloring and Particles Experiment
- Find a source of heat in the classroom – photo/draw and caption to explain
- Find a place in the classroom where heat is moving from one thing to another – photo/draw and caption to explain
- Find conductors and insulators in the classroom – photo/draw and caption to explain
- Cafeteria Field Trip – keep a list of places where thermometers are used and why they're needed there
- Model a multiplication problem (pictures with captions, drawings, pencil/paper), write a number sentence, explain its meaning
- Find an array in the classroom, model it (photo, drawing), write a multiplication sentence for the array, explain in words what it means about equal groups
- Divide in pairs – model one of the x 10 facts; share model with class; look for relationship between factors and products in x 10 facts
- Practice reading a nutrition label
- Write a sample opinion piece about whether schools should provide devices to students or not
- Write an opinion on the healthiness of eggs
- Critique an online restaurant review; give specific feedback using our Writing an Opinion rubric
- Collect recipes from home; underline sequencing words, illustrate steps in a comic-strip style
- Collect restaurant menus to use as samples
- Add restaurant ideas to Wiki

- Upload restaurant ideas to [Wiki](#)
- Upload Heat/Energy models to [Wiki](#)
- Upload multiplication models to [Wiki](#)
- Student-Teacher Opinion-writing conference

- *BYOT options:* Apps that take notes, take pictures, write captions, draw, sequence, word process such as Skitch, Story Kit, My Story, Everenote, NoteLedge, Educiations, ScreenChomp, audio and video recording apps, Wixie, Wiki, etc.
- [Heat and Energy flipchart](#)
- Class set of thermometers
- Lava lamp
- Experiment sheets: [ice cube experiment](#), [light bulb experiment](#), [food coloring and particles experiment](#), [3 spoons experiment](#)
- Photos of buildings with columns (Parthenon, US Supreme Court Building)
- [Wiki](#) with Nutrition Information page
- [Eggs are Healthy](#) article
- [Eggs are Unhealthy](#) article
- [Writing an Opinion Rubric](#)
- Restaurant Reviews
- Snacks or foods with nutrition labels
- Recipes
- Menus from restaurants



## Performance Task Plan

<b>Instr. (con't)</b>	<ul style="list-style-type: none"> <li>• Creating a Restaurant Layout: using Wixie/Pixie, explain rubric</li> <li>• Graphing Health Information – bar graphs and picture graphs, creating and interpreting</li> <li>• Creating a Menu: explain rubric, look at sample menus</li> <li>• Creating a Cooking Guide: explain rubric, choosing a signature dish</li> </ul>	<ul style="list-style-type: none"> <li>• Choose a tech tool and create a Restaurant Layout to add to your digital portfolio</li> <li>• Choose a tech tool and create a Menu to add to your digital portfolio</li> <li>• Choose a tech tool and create a Cooking Guide to add to your digital portfolio</li> </ul>	<ul style="list-style-type: none"> <li>• Restaurant Layout uploaded to Wiki</li> <li>• Menu uploaded to wiki</li> <li>• Cooking Guide uploaded to Wiki</li> </ul>	<ul style="list-style-type: none"> <li>• Restaurant Layout rubric</li> <li>• Menu rubric</li> <li>• Cooking Guide rubric</li> </ul>
<b>Closure &amp; Reflection</b>	<ul style="list-style-type: none"> <li>• Opening Day – Showcase Restaurants, invite visitors from community and school</li> <li>• Creating a Restaurant Review – explain rubric</li> <li>• Comparing restaurants – bar graphs</li> </ul>	<ul style="list-style-type: none"> <li>• Create and send invitations to Opening Day (parents, other classes/teachers)</li> <li>• Create a mini-restaurant for Opening Day (decorations, cook your signature dish for customers to sample)</li> <li>• Review a restaurant from Opening Day</li> <li>• Compare the health information for the signature dishes of each team's restaurant. Create a class bar graph.</li> </ul>	<ul style="list-style-type: none"> <li>• Opening Day</li> <li>• Restaurant Reviews uploaded to Wiki</li> <li>• Class bar graph uploaded to Wiki</li> </ul>	<ul style="list-style-type: none"> <li>• Writing an Opinion rubric</li> <li>• Graph Club</li> </ul>

### Differentiation

*(How will you differentiate content and process to accommodate various learning styles and abilities? How will you help students learn independently and with others? How will you provide extensions and opportunities for enrichment? )*

- Choose mixed-ability teams that have access to a variety of devices and tech tools. Students are given choices in the tools and methods they use to display their learning.
- Intervention: small group and one-on-one remediation, extended time to complete project milestones, multiplication problems using smaller digits/numbers, analyze recipes based on only 2 most important ingredients
- Extension: explain concepts to struggling students, require students to include more complex arrays and multiplication problems in their restaurant layout, more complex analysis of health information in recipes, choose recipes with more ingredients to analyze

### Teacher Reflection/Notes

*(As you were implementing this project in the classroom, what worked well? What needed to be changed, adjusted? What would you do differently next time? )*

Successes: Students were creatively engaged when creating their own heat/energy and multiplication models. The science experiments were effective and exciting. Having students brainstorm the list of Tech Tools appropriate for each task was helpful. Getting students to discuss rubrics in pairs before beginning project milestones was more engaging and effective than teacher-led explanations of rubrics.

Areas for Improvement: Show students how to upload models to the wiki earlier in unit with a mini-lesson. Next time, have more hard copies of opinion articles available for students without devices. Perhaps give students more control in deciding which problems restaurant designers might need to solve, and then let them solve them as part of the project.